

joints of the tarsi, testaceous, piceous at apex; tarsi black, the joints paler at the base beneath; claws testaceous, much curved.

Wings elongate, acute at the apex, which is slightly falcate in the posterior, about equal in length, hyaline; neuration for the most part black, finely interrupted with yellowish-white on the subcosta and lower cubitus, and with similar but longer and fewer interruptions on the radius; the costal nervules mostly have a yellowish-white point in the middle (in anterior), and there are scattered nervules of the same colour over the disk of the wings; pterostigma inconspicuous, whitish yellow, with closely-placed thickish black nervules. In the anterior wings nearly all the nervules (except in the costal area) and the axillæ of the marginal and submarginal forks are clouded with blackish, giving the wings a strongly irrorated appearance; these cloudings are congested into a rather conspicuous spot at the termination of the branch of the lower cubitus on the inner margin, and there is a similar but smaller spot on the disk towards the apex on the line of the cubiti. In the posterior wings the cloudings are absent save on a few nervules round the apical portion and on the apical forks and those of the inner margin; a cubital spot on the disk before the apex as in anterior.

Expanse of wings about 85 millim.; greatest breadth of anterior  $11\frac{1}{2}$  millim.

*Hab.* Lanai. Mr. Wilson brought one example.

The only species of Myrmelconidæ otherwise known to exist in the Hawaiian Islands is *Formicaleo perjurus*, Walker, a very much smaller insect (expanse about 60 millim.), without irrorated wings. Both, with other known species, belong to the group of *F. tetragrammicus*, F., of Europe and Asia.

### XIX.—*Descriptions of Three new African Muridæ.*

By OLDFIELD THOMAS.

#### *Mus (Dasymys) Bentleyæ*, sp. n.

Closely allied to *M. (D.) incomtus*, Sund.\*, of which a good description with figures has been published by Peters under the name of *Dasymys Gueinzii* †. Agreeing with that

\* (Efv. Vet.-Ak. Förh. 1846, p. 120 (publ. 1847). Prof. Leche has kindly given me such information about the type of this species as has confirmed my supposition that *D. Gueinzii* was synonymous with it.

† MB. Ak. Berl. 1875, p. 12.

species in general form, the characters of its skull and teeth, and other essential points, but distinguished by its decidedly smaller size, smaller skull, and proportionally longer tail. Colour as in the figure of "*D. Gueinzii*." Ear large and broad, almost perfectly circular in outline; laid forward it falls about 2 millim. short of the posterior canthus of the eye. Posterior foot-pads six. Mammæ 1—2=6.

Dimensions of the type (an adult female in spirit):—

Head and body 128 millim.; tail 148; hind foot 30·5; ear, height above crown 15, breadth 17.

Skull: basal length 31·5, greatest breadth 18, nasal length 12·2; interorbital breadth 4; interparietal, length 3·8, breadth 9·2; nasal tip to back of interparietal 32·7; anterior zygoma-root 4·1; palate length 19·6; diastema 10·3; palatine foramina 8·1; length of upper molar series 6·5.

*Hab.* Ngombi (also called "Wathen"), Lower Congo.

Type B. M. 91. 2. 11. 2. Collected and presented, with many other interesting animals, by Mrs. Bentley, after whom I have great pleasure in naming it.

To this species I also assign two specimens obtained by Emin Pasha in Monbuttu, Central Africa, and referred by me in 1888\* to *Mus Gueinzii*, although the peculiarity of finding a Natal species in Monbuttu was commented upon at the time. Since then, however, the Museum has received, through the kindness of Prof. du Bocage, two specimens of the Angolan species described in 1870 † by Peters as *Mus nudipes*, a species described without any reference to the characters which made the same author erect *M. Gueinzii* into a separate genus, but one which proves to be so closely allied to this latter as to be very doubtfully separable specifically from it. Having this form now for comparison with *M. Bentleyæ*, and having also seen in the meantime the type of "*Dasymys Gueinzii*" in Berlin, I have changed my opinion about the Congo and Central-African species, and now consider it to be new.

The specimens of *nudipes* are remarkable for the entire suppression in them of the fifth hind foot-pad, while they are present in *M. Bentleyæ* and (*vide* Peters) in the Natal form. Were it not for this difference I should have little hesitation in uniting specifically the Natal and Angolan species, even though the latter appears to have slightly longer hind feet than the former.

\* P. Z. S. 1888, p. 12.

† J. Sci. Lisb. 1870, p. 126.

*Mus Daltoni*, sp. n.

Size medium. Fur fairly long, rather coarse. General colour dull fulvous, not unlike that of many species of *Gerbillus*; darker along the centre of the back, clearer fawn along the sides. Chin, chest, and belly pure white, the hairs white to their roots. Ears large, rounded, thinly clothed with minute brownish hairs. Outer sides of limbs and wrists and ankles coloured like the back; inner sides and upper surfaces of hands and feet white. Pads large and rounded, those of the hind foot almost touching each other; distance from the front of the last hind pad to the heel equal to that from the same point to the tip of the second toe; the pad itself oval, but little longer than broad; hallux not reaching to the base of the second toe; fifth toe just to the end of the first phalanx of the fourth.

Tail about as long as the head and body combined, slender, finely scaled, greyish above, rather paler below, thinly covered with minute hairs, brown above and white below, which slightly increase in length at the tip. Mammæ 3—2=10.

Skull with a narrow delicate muzzle; interorbital region flat, its edges square and slightly thickened, but without raised ridges; plate of anterior zygoma-root evenly convex forward; palatine foramina ending level with the anterior laminae of  $\frac{m-1}{2}$ ; bullæ rather small. Molars small and narrow.

Dimensions of the type (B. M. 65. 3. 30. 6), a female specimen preserved as a skin:—

Head and body 117 millim.; tail 114; hind foot 19·2; heel to front of last foot-pad 9·1; ear 15.

Skull: tip of nasals to lambda 23·3; greatest breadth 13·6; nasals, length 11·6, greatest breadth 3·2; distance between outer corners of infraorbital foramina 7·0; interorbital breadth 4·2; length of anterior zygoma-root 3·3; palate length 14·1, breadth outside  $\frac{m-1}{2}$  5·8, inside  $\frac{m-1}{2}$  3·4; diastema 8·0; anterior palatine foramina 6·4; length of upper molar series 4·2.

*Hab.* W. Africa (probably Fernando Po). Collected by Mr. J. T. Dalton.

This species belongs to the group characterized by the possession of 3—2=10 mammæ and by their otherwise general resemblance to the multimammate African species. To this group should be referred *M. albipes*, Rüpp., *M. colonus*, Brants, and *M. angolensis*, Boc.; but all these are decidedly larger than *M. Daltoni* and all have grey-based instead of pure white belly-hairs.

A second specimen obtained from Mr. Dalton at the same time as the type agrees with it in every respect.

*Mus Burtoni*, sp. n.

Size rather small, form slender and delicate. General colour a soft greyish rufous, smooth, scarcely grizzled, darker along the middle of the back, paler on the sides, the general tone not unlike that of *Mus sylvaticus*. Belly-hairs grey basally, pure white terminally, the line of demarcation on the sides not sharply marked. Ears rounded, laid forward they reach just beyond the centre of the eye; slaty grey in colour, thinly clothed with very sparse fine hairs, so minute that the ear as a whole looks quite naked. Hands and feet whitish, the dark colour of the body not encroaching on the metapodials; pads as usual 5-6, smooth, rounded, well defined; palms and soles quite naked, the skin perfectly smooth between the pads; pads at bases of first and fifth hind digits each with a small supplementary external pad. Hallux reaching to the base of the second digit, fifth toe to the distal end of the first phalanx of the fourth. Tail longer than head and body, very slender, pale slate-coloured above, scarcely lighter below, thinly haired, the hairs not hiding the scales; scales very small, the rings numbering about seventeen to the centimetre. Mammæ 1-2=6.

*Skull*.—Upper profile evenly but decidedly convex. Interorbital region broad and smooth, its edges sharply square, but without upwardly projecting ridges; posterior part of frontal embraced laterally by two slender arms of the parietals, which run forwards close to the supraorbital edges. Interparietal large, its antero-posterior diameter fully or slightly more than half its transverse diameter. Anterior zygoma-root short, its anterior edge evenly convex forward. Diastema very long, owing to the small size of the molars. Anterior palatine foramina ending just in front of the level of the root of  $m_1$ . Bullæ small, little swollen.

*Teeth*.—Incisors orange above, rather paler below. Molars excessively small, their combined length less than half the diastema; their surfaces too much worn in the type for description, but their structure is apparently similar to that found in the small-toothed African species, such as *M. albipes* or *M. coucha*;  $m_2$  with the usual antero-internal but no antero-external secondary cusp.

Dimensions of the type (an adult or even aged female in alcohol):—

Head and body 108 millim.; tail 133; hind foot 22; heel to front of last foot-pad 10; ear, above crown, 13·5.

Skull: nasal tip to back of interparietal 32·3; greatest breadth 15; nasals, length 12·2, breadth 4; interorbital

breadth 5·7; interparietal, length 5·2, breadth 9·6; length of anterior zygoma-root 4; palate length 17·8; diastema 9·8; length of upper molar-series 4·7; breadth of  $\underline{m.1}$  1·4; breadth of palate inside  $\underline{m.1}$  (c.) 3·3.

*Hab.* Ankober River, Wasa, Ashantee.

The type specimen (B. M. 82. 6. 12. 5) of this beautiful and interesting little species was obtained by the well-known explorers Capt. (later Sir Richard) Burton (after whom I have named it) and Lieut. V. Lovett Cameron, during an expedition to the Gold Coast in 1882.

The only species with which the present one could be confounded is *Mus erythroleucus*, Temm., and that only because its mammary formula and detailed characters have not hitherto been published. Thanks, however, to the kindness of Dr. Jentink, of the Leyden Museum, I have had the opportunity of examining the type and of directly comparing its skull with some of the Museum specimens. This type I have been able to match in every respect with some spirit specimens from Akropong, on the Gold Coast, presented to us by Prof. Rutimeyer in 1886. These show that *M. erythroleucus* is one of the multimammate species allied to *M. natalensis*, *coucha*, &c., and that it has, as is indeed shown by the type itself, a hallux which falls far short of the base of the second toe and a fifth hind toe that only just attains to the base of the fourth; the tail also is slightly shorter than the head and body.

## XX.—On the Japanese Cleridæ.

By G. LEWIS, F.L.S.

THE list of species in the family Cleridæ I am able to give from Japan is not a long one, and it seems probable that my acquisitions in the family exhibit my collection in its weakest part. Some of the species obtained were apparently very local, and only three of the genera, leaving out *Necrobia*, contain more than one species; and this is a condition of things not likely to be maintained in any tropical or subtropical fauna. There is evidence also that the abodes of some of the species are in the highest branches of the decaying forest-trees, whose leafless and partly barkless limbs stretch out above the foliage of the accessible brushwood. These of course are difficult to obtain, and it is only the detached single examples from such places that the collector fortuitously sweeps into a net from the lower foliage.